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Perspectives for Chemicals and Petrochemicals in Tamil Nadu

Competitiveness in the Private Sector in the VIII Plan

CONTENTS

Editorial—Some Highlights

General Economic Scene 1

Agricultural Development in Tamil Nadu 12

Industrial Development in Tamil Nadu 15

Education, Science and Health 18

Employment and Labour Relations 20

Other Items 21

MIDS News 23

December Development Seminar

Perspectives for chemicals and petrochemicals in Tamil Nadu
— P. K. N. Panicker 25

Competitiveness in the Private Sector in the VIII Plan 41

EDITORIAL - SOME HIGHLIGHTS

I. General Economic Scene

State

VIII Plan

The State Planning Commission reviewed in November, 17 all of the 18 task force reports and on the basis of this review asked that the relevant chapters should be finalised. The task force on resources reported that for the VIII Plan Rs. 6900 crores are insight and that Rs. 1,600 crores could be regarded as the additional resource mobilisation giving a total of Rs. 8,500 crores. The Commission agreed to recommend to the government the VIII Plan of Rs. 8,500 crores and on that basis, each of the 18 task force reports were allocated its share, following the priorities established by the Commission. The only task force report yet to be reviewed was that of urban and housing development which is ready and is to be reviewed in early December.

Climate and Prices

The climate in November was somewhat unusual. In the first 20 days of the month, the monsoon was active and the state received good rains every where except in Madras city which had two spells of rain. As a result the drinking water reservoirs are only 1/6 full 1167 mc ft against 6483 mc ft capacity and so the prospects of drinking water even on alternate days beyond February/March is in some doubt. (Red Hills 573 mc ft, Sholavaram 256 mc ft and Poondi 329 mc ft). But the rest of the state had rains. (Kodaikanal and Ambasamudaram 3 cm each, Coleroon 44 mm, Seerkazhi 31, Thiruthuraipoondi 39). Mettur received inflow and for sometime its outflow was stopped because of the rains. From the last 10 days of the month, the climate became dry and cool, which is in Tamil Nadu the winter climate. If there is no more monsoon there will be serious problems for Madras

city. On prices, CSO's monthly abstract for August reports that the index number of consumer prices for industrial workers shot up by 10 points to 843 in May over April's 833 : the index number of consumer prices for agricultural labour rose again by 13 points to 705 in May over April's 695 (which was itself a 10 point rise) and that consumer prices index number for urban non manual workers record a uniform 1 point rise in June for all 5 locations — from 147 in May to 148 in June, for Madras from 142 to 143 for Coimbatore, from 145 to 146 for Madurai, from 140 to 141 for Salem and from 145 to 146 for Tiruchirapalli.

Power

The power situation in the state in November was normal, with its 20 per cent cut on HT consumers continuing. The State government has approached the Union government for approval of doubling the 120 MW gas turbine power plant at Basin Bridge to 240 MW at a cost of Rs. 226 crores. The petroleum ministry has allocated 50,000 tonnes of diesel for the plant which will enable it to run for 240 days a year at 6 hours a day gneerating 137 MU per annum. The cost of generation will be Rs. 2.57 per hour. Of the 14 coastal thermal power plants that are to be set up during the VIII plan, Tamil Nadu has 5 plants at Ennore, North Madras, Cuddalore, Tuticorin extension and Nagapattinam. Preliminary work has already started on the Ennore and Tuticorin extension. Kalpakkam reports that 2 units each of 235 MW capacity of the Madras Atomic Power station are gradually being brought to work at 75 per cent capacity from the current 65 per cent, as approved by the safety review committee. The Tamil Nadu Electricity Board reports that it will operate the energy banking schemes for HT consumers with captive generator facility for a period of 12 months against the earlier announced 9 months.

The power situation in the country in November was normal, with Kerala and AP resuming their earlier status of power surplus states. The 210 MW first unit of the Kayamkulam plant will be ready in 1995. The Union government reports that the cabinet has approved the proposal to set up the National Power Transmission Corporation as a major step towards the evolution of a national power grid. This will involve a massive programme of laying in either high voltage transmission system and associated sub stations — starting with the commissioning of high voltage direct current between Vindhyachal super thermal station and Rihand thermal station, enabling 250 MW power being transferred either way between the northern and western region. For the 38,000 additional MW envisaged for the VIII Plan, referred to in earlier issues of the Bulletin (See Vol. XIX p. 818), Rs. 106,000 crores will be required and this minimum provision has to be made despite the resource crunch facing the plan. The government reports that work has already started on projects with an aggregate capacity of 26,000 MW. The government is also setting up in the VIII Plan a Rs. 100 crores fund for creating a pool of spares for the sector, which will be maintained by BHEL.

Water and Housing

The rains in November in the state were earlier referred to. Tanks in all districts are now full, particularly in districts like Chengai Anna and North

Arcot where they had gone dry. The Mettur level is over 70 feet. It is the drinking water situation for Madras city which continues to be unsatisfactory and will be so till the Telugu Ganga scheme brings water to Madras. In Madras, both governments — Tamil Nadu and AP — report good progress in the building of the canal. The government announced a large rural housing scheme involving the building of 30,000 houses for members of non harijan backward class and weaker sections. This will still be a small start in the large and unsatisfied demand for housing.

Panchayat Bill and Banks

The state legislature in November passed the Tamil Nadu Panchayat (Third Amendment) Bill which provides a fixed term for panchayats of 5 years. If any is dissolved or suspended, elections for a new panchayat or panchayat councils must be held within 6 months. 30 per cent of total seats is reserved for women. The financial position of the panchayats will be reviewed every 5 years. The banking system in the state has progressed fast in the last 20 years, with total deposit increasing by 30 times (from Rs. 293.49 crores in June 1969 to Rs. 9058.63 crores in December 1988) and advanced by 22 times (from Rs. 380.63 crores to Rs. 8373.65 crores). The bank branches have increased 4 fold from 1066 to 4131. The states' share of the rural sector in lending was 13.11 in September 1988, with 1/3 of advances of the scheduled banks going to rural and semi rural areas. The credit deposit ratio was 92 in December 1988, falling from the Rs. 130 in June 1960. This record of quantitative expansion since the nationalisation of the banks is satisfactory. The same cannot be said about the qualitative sector — such as customers services, servicing loans etc, where there is need for training of staff and improvement.

Taxes

The government reports that the uncollected revenue as on March 31, 1988 was Rs. 332 crores, with Rs. 83 crores pending for 5 years. The Comptroller and Auditor General reports that sales tax arrears are Rs. 202.2 crores plus and state excise Rs. 52.65 crores and land revenue Rs. 32.89 crores. This is one aspect of the resource crunch faced by the state. The report also states that the objective of chanelling the net process of the Tamil Nadu Raffle Scheme for specific welfare programmes like water supply and house sites for Adidravidars in rural areas has not been achieved. The committee to oversee this has not met for the past 5 years. These lacks need urgent attention by the government and legislature.

National

VIII Plan

As reported in the last issue of the Bulletin, there is a delay in the formulation of the VIII Plan because of the general elections and the uncertainty as to the nature and programme of the next government in relation to the Plan. One consequence of this, is that the 1990-91 Annual Plan has had to be delinked from the VIII Plan. The Planning Commission has asked the Union ministries and State governments to start work in the 1990-91 annual plan following the broad based national

priorities as higher growth rates, poverty alleviation and employment generation. The level will be related to the 1989-90 outlay of Rs. 34,000 crores in the union sector and Rs. 23,000 crores in the states sector. In view of the scarcity of resources, private entrepreneurs will be asked to commit a larger portion of their internal resources for their projects in the VIII Plan and reduce their dependence on public financial institutions.

Prices

Inflation for October in terms of the whole sale price index remained stationary at 167.7 for the week ending October 28 (similar to the 167.7 for the week ending September 30). On a point to point basis, the rate of inflation for 12 months was 7.5 per cent, with the major increase being in manufactured products at 12.0 per cent, while food articles registered a decline of —1.2 per cent. Consumer prices index for the period April-September 1989 shows a similar rise to the WPI rise at 7.5 per cent. Despite a bumper harvest of both food and cash crops, the seasonal prices down trend is mild (like last year). In 6 weeks, pulses price has risen by 22 per cent, oil seeds by 27 per cent, sugar by 15 per cent, along with tea, milk and milk products which have recorded steep increases. The Planning Commission attributes this price rise — in both WPI and CPI—to the mismanagement of the money supply in the economy. Instead of money supply being controlled at 10-11 per cent during the year, it has been 16-19 per cent in the first four years of the Plan. Liquidity growth in the economy is 18 per cent in 1988-89 and is moving towards the same 18 per cent in 1989-90. There has been an acceleration in the rate of increase of reserve money between March and April of 1989. This cannot be neutralised by raising the CRR, as it has reached the statutory limit of 15 per cent. In this connection it should be noted that short term credit accounts for 80 per cent of total bank credit and only about half of the total bank credit is covered by the general lending rates prescribed by RBI, with the balance operating under concessional rates. To that extent the RBI's control over our credit to the non government sector is rather loose. So far reserve money creation has been 6.5 per cent (Rs. 4037 crores) in the first half of 1989-90. This is the result of the steep increase in net RBI credit to the government at Rs. 7415 crores (12.4 per cent). Unless government expenditure is cut back and the RBI credit to government is slashed there is no hope of countering the rate of inflation. The government has set up a working group to review the working of MODVAT. Its effect on excise revenue collection, its simplification and enlargement of its seope are to be examined.

Stock Exchange and Union Loan

There is a quiescence in the stock market in view of the General Elections, with a sharp decline in value of some scrips which have been dependent on official patronage. The Union finance ministry has asked financial institutions and their subsidiaries wanting to become members of stock exchanges to ensure that their share holdings are not used directly or indirectly by others to take over companies. The ministry has also decided not to sanction fresh issues of companies unless all previous issues made are duly listed in the stock exchanges. This condition is

to be written into all approvals given by the controller of capital issues. The chairman of the Securities and Exchange Board of India states that the Seventh Plan has been the best period for the capital market, though it had tensions and worries for 2 years which would result in giving serious attention to the long term healthy development of the markets. On the assumption that during the VIII Plan, the savings rate will be 24 per cent, financial savings 55 per cent of the total savings of the household sector, national income growing at 5 per cent per annum, prices rising at 7 per cent per annum and investment in shares, debentures and mutual funds 10 per cent of the financial savings of the household sector in 1994-95, Rs. 50,000 crores will be raised from the capital market, of which the private sector will mobilise Rs. 35,000 crores and the public sector units Rs. 15,000 crores and an additional Rs. 15,000 crores through investment by foreigners. The resources raised from the capital market have been progressively rising from Rs. 3680 crores in the VI Plan, to Rs. 22,500 crores in the VII Plan, which will be more than double in the VIII Plan. Towards the end of November, the inter-bank money market has reached its level, after the dizzy heights at the start of month (being 45 percent on November 11). The call rate at month end is 11 per cent which means that the liquidity crunch in the money market is over. The Union government announced at the end of November 3 loans totalling Rs. 18,000 crores.

Economy

The Economy has some plus points. The good monsoon and the resultant repeat of plentiful foodgrains and cash crops means a good agricultural and foodgrain growth. Industry however poses a serious question which will be discussed in the next section. The uncomfortable price situation was earlier reviewed which shows that the domestic rate of inflation is higher than that of our major trading partners. This also has meant that while the nominal rate of exchange of the rupee has declined by 11 per cent the real rate has fallen only by 5 per cent. The balance of payments crisis is affecting trade policy and is leading to short term measures about the trading environment, as the economy faces bankruptcy on the external front.

Industry

As noted above, the industrial growth for the first quarter of 1989-90 shows a steady decline to 1.8 per cent compared to the first quarter of 1987-88 at 12.7 per cent (April 1989 4.3 per cent, May 1989 1.1 per cent and June 1989, 0.8 per cent). Within this industrial growth decline, the manufacturing sector was poor being for April — 1.3 per cent according to CSO's quick estimates revised to 1.4 per cent later, for May — 2 per cent according to quick estimates revised to — 1.2 per cent in the provisional estimates, and for June — 2 per cent revised to — 0.7 per cent, showing — 0.6 per cent for April-June 1989 compared to 14.2 per cent in April-May 1988. The industries which showed a decline in production of 1-40 per cent in the first quarter of 1989-90 are saleable steel, cement and fertilisers among basic industries, and tea, sugar, and textile among agro-industries. The causes for this manufacturing slow down are still under study. On the supply side, the Planning Commission holds the finance ministry's cut in imports has constrained production

in the fast growing import intensive industries — the so called sunrise industries. On the demand side it is pointed out that the pent up demand for the elite consumption items — colour TV, VCPs, Marutis, mixers, etc. have been met, so that the demand for them is now tapering off, and it is these items which showed growth in the last 2 years. CSO's quick estimates for July for industrial growth is 3.5 per cent and for the 4 months April-July 1989-90 is 3.2 per cent. But the Financial Express in its editorial on November 24 points out that the difference between CSO's quick estimates and revised estimates is the result of lowering the base figure for 1988 and raising the corresponding figure for 1989. For April 1989 the quick estimate of 165 was revised to 169.2 (on October 17) and the estimate for April 1988 was first revised from 167.2 to 166.9 (in October 17 memorandum) and later to 166 (in November 20) release which led to the April growth improving from — 1.3 per cent to plus 1.4 per cent. For May, the November release revised upward the May 1989 index and lowered the May 1988 index, resulting in the — 1.2 per cent decline for the month being revised to 1 per cent. For June, the November 20 memorandum shows a smaller drop of — 0.7 per cent against the — 2 per cent in the October 17 memo, by raising the quick estimate of 175.1 per cent (given October 17) to 176.2 in the provisional estimates of November, while the June 1988 index was reduced from 178.7 per cent (given in October 17 memo) to 177.5 per cent (in the November 20 memo). The 3.5 per cent growth reported for July 1989 is similarly because of the downward revision of the July 1988 index. These changes need to be checked further inorder that the credibility of CSO estimates is not shaken. BIFR has now changed from recommending more sick units for rehabilitation to their liquidation. In 1987 the Board approved a revival package for 130 sick units and liquidation of 97 units. In 1988, 49 cesses were approved for revival and 25 for liquidation. It remains to be seen whether this represents a much needed shift in policy towards industrial sickness involving liquidating unviable units. It is hoped that this is so. BIFR complains that the State governments hesitation and delay in selling the surplus land available with the sick units, is holding up the finalising of the rehabilitation packages for a large number of sick units. The abrupt discontinuance of the central investment subsidy scheme for promoting industrialisation in backward areas has led to some confusion in the states, as they have been sanctioning a large number of such projects for subsidy which now is non existent. In place the government announces that it has approved the setting up of 50 growth centres with a view to remove industrial regional disparties. The largest beneficiaries are UP (6), MP and Bihar (5), AP and Rajasthan (4), with the others ranging from 1 to 5. Two studies report a positive picture of the private sector. An RBI study on corporate investment in 1989 is on the basis of the Rs.7025 crores of sanction by term lending institutions plus Rs. 370 crores from the Bills Rediscounting and Technical Development Fund Scheme. In addition project expenditures in 1989 are expected to be Rs. 2500 crores giving the total capital expenditure at Rs. 9900 crores which is 34 per cent over the Rs. 7413 crores for 1988. The Economic Times study similarly reports that the private sector companies record a bright future in the coming years by making the plants competitive both cost wise and

quality wise through using the latest state of the art technology, exporting capacity, installing energy saving and pollution control devices, setting up 100 per cent export oriented units and new projects in backward areas, diversification, increasing foreign collaboration, enlarging the marketing net works and seeking support of capital market for financial expansion, diversification, and modernisation programmes.

Public Sector Enterprises

The Bureau of Public Enterprises reports that 37 public sector units recorded 19.19 per cent production from April to September 1989-90 at over Rs. 2977 crores which was also 93 per cent of the target of Rs. 3186.12 crores. For September the production growth was 18 per cent with the good performers being Andrew Yule (111 per cent), Bharath Heavy Plate (101 per cent), Bharath Wagon (100 per cent), HEC (103 per cent), Maurti (104 per cent), Richardson and Cruddas (130 per cent), Bridge and Root (138 per cent). The Planning Commission has recommended to the government the setting up of new a public sector company to manufacture 56 + seater and 100 + seater aircraft and production of a small aircraft in the private sector to meet the domestic demand of 196 aircraft in 150-400 seater capacity range by 2005 and 250 aircraft of 200 seat capacity requiring an investment of Rs. 7225 crores. The priority for this recommendation needs some thought.

National Production Front

Steel

There is and has been a serious shortage of pig iron in the economy, — services by affecting many foundries — some closing down, and most carrying idle capacity. The government's order to SAIL for its plants to switch over to produce pig iron is questionable because apart from interfering with managerial decision making, it will involve sacrificing value added products, while pig iron can be imported from abroad at low cost. Now with the commissioning of the sinter plant of the Vishakapatnam steel plant in mid November, its blast furnace will be commercially operated to produce the much needed pig iron. Infact when the plant becomes fully operational it will produce 5.54 lakh tonnes of pig iron. This is a prominent part of its product mix because to save on capital the 8 lakh tonne capacity beam mill has been dropped, but also which makes the plant the most costly in the world at Rs. 26000 per tonne. This mess is due to the mismanagement of the project. The project which was scheduled to cost Rs. 2256 crores in 1979 is now estimated to cost Rs. 7,700 crores. Whether the project can keep its schedule for completion is in serious doubt. SAIL reports that its installed capacity by the end of the VIII Plan will increase to over 25 million tonnes, making it the third largest steel production in the world. SAIL reports that it is exploring the possibility of setting up a company to handle exclusively the export of its steel products and earn foreign exhange to meet its massive modernisation programme.

Crude

ONGC reports that oil and gas have been struck in the Krishna-Godavari basin, 60 km south east of Vijayawada, with the oil flow of 559 barrels a day

and gas at 1271 cubic metres a day. This is the second hydro carbon strike in the basin. The government reports that it has developed plans to end flaring of gas by 1995 in the several gas fields, current and to be developed in the country, increasing from the present 34 million cubic metres (out of which 11 million cubic metres are flared) to 80 million cubic metres by the end of the VIII Plan. ONGC reports that it will submit in January 1990 a feasibility report developing structures FY3 and PY1. The cost of this expansion is part of the ONGC plan of Rs. 3500 crores for the VIII Plan. ONGC also reports that it has drawn up a countrywide plan for commercialisation of Compressed Natural Gas (CNG) which will enable 4,25,820 vehicles to run as CNG replacing liquid hydro carbon by 2000. The cost is 45 per km compared to the present 93 p and 150 p per km. The switch over to CNG will thus be more economical and efficient and less polluting.

Coal

CIL faces a deficit of Rs. 300 crores in its sanctioned plan of Rs. 1800 crores for 1989-90. It has therefore planned to raise Rs. 200 crores through the issue of bonds and another Rs. 100 crores from its employees and the public participating in the fixed area cumulative deposit scheme. It has paid Rs. 300 crores as arrears to its 6.7 lakh employees from November 1 and is requesting them to invest atleast a part of it in the fixed deposit scheme.

Non ferrous

The National Aluminium Company (NALCO) is following up its first year of commercial production when it earned Rs. 235 crores by export to US, USSR, Brazil, Norway, China and North Korea, exporting in the first 6 months of this year Rs. 206 crores (2.4 lakh tonnes) which means for the year it will reach the export target of Rs. 400 crores (4 lakh tonnes) despite the international glut and the depressed state of the market. It has submitted to the government for its approval a plan for capacity expansion costing Rs. 1240 crores also Rs. 60 crores worth of downstream units and several joint sector projects in the state.

Jute, cement and sugar

The jute industry is in a bad shape. The closure of mills in the first 10 months January — October 1989 is 12 compared to the 3 mills for all of last year. The closure has led to retrenchment of some 40,000 workers. The number of mills closed since 1986 is 20 and this high incidence is despite the allocation of Rs. 100 crores of orders under various schemes. The government is holding tripartite talk for the opening of the closed mills and some managements have been sent notice to open only their mills. The problem is serious and modernisation will help only some workers and mills. There has to be a redeployment of workers in fresh investments. On the cement front, the review committee of the National Council for Cement and building materials has recommended that the R & D contribution of 75 per tonne should be doubled to Rs. 1.50 as one means of strengthening the industry's production programme and that the government should levy a cess on research for the industry. It has set forth a Rs. 45 crore scheme for further strengthning and modernisation of the R&D of infrastructural facilities of the

council. The aim is to help the industry to maintain excellence of cement and building materials. A worrying problem is that the industry is caught in the industrial deceleration of the year. In the first quarter of 1987-88 its production increased by 3.5 per cent in the second quarter it declined by 3.4 per cent, despatches have fallen from 9.55 million during July-August 1988-89 to 9.5 million this year. Manufacturers are cutting back on production because of slack demand. On the sugar front, government reports the import of 2.42 lakh tonne of which 1.42 lakh tonnes have arrived and have been despatched to the consuming centres. Sugar production on November 15 was 5 lakh tonnes compared to last year 2.92 lakh tonnes. With the imports the government states that the quality sugar available is adequate to meet the demand. The UP government has fixed a high Rs. 40 per quintal as the sugarcane price as an incentive for production of more cane. In the 1988-89 crushing season 242.93 lakh tonnes of cane was crushed and it hoped that this will well exceed this season at the start of November. The 1988-89 season ended with 12.3 lakh tonnes as closing stocks — the lowest in 7 years.

Agricultural Production

The agricultural ministry reports that the 1988-89 foodgrain output was a high 171 million tonnes. But this record production is unbalanced because though the procurement target of 13.30 million tonnes has been exceeded to 14.90 million tonnes, it is still at least 1 million short of the demand. The 1988-89 season ended with 12.3 lakh tonnes of closing stocks — the lowest in years. NAFEB & STC have been asked to import 1 million tonnes which will cost our foreign exchange reserve over Rs. 860 crores. In the VIII Plan, the national pulses development programme must meet the gap and produce adequate pulses for this largely vegetarian country with its mass poor people for whom the only source of protein is pulses. Kharif oil seeds output is estimated at 93 lakh tonnes for 1989 against the 1988 record of 91 lakh tonnes. A recent study published in the Financial Express (November 8) conveys the distributing information that a large part of the value added in agriculture in the Green Revolution in states with high per hectare yield is accounted for by large input subsidy. As the table below shows, one third of the value added in agriculture in Punjab has come through these subsidies in 1980-87 as was 23 per cent of the value added in Haryana, 21 per cent in AP and 18 per cent in UP. States with low growth in value added in agriculture have been getting low input subsidy — Kashmir, Assam, HP.

State	Total input subsidies as percent of value added in agriculture
Tamil Nadu	31.7
Punjab	24.5
Haryana	23.0
AP	21.3
Rajasthan	19.5
UP	18.2
Orissa	17.5
All India	16.4
Bihar	15.1
Karnataka	14.1
MP	14.9
Gujarat	13.5
Maharashtra	12.4
WB	10.8
Kerala	10.2
J & K	5.4
Assam	2.4
HP	2.0

Source : Input subsidies in Indian Agriculture by A. Gulati, EPW.

The above table shows a highly regressive regime. States which are getting a high level of agricultural subsidy are also states with high per capita SDP. But a large subsidy does not always mean a high rate of agricultural growth as the case of Tamil Nadu shows. It received the highest percentage of import subsidy but its agricultural growth has been poor as the MIDS publication, Tamil Nadu Economy, shows. The states which have received heavy subsidies have also used improved technology — of subsidised fertilisers, irrigation, HYV seeds and electricity.

Foreign Trade

November saw some developments in the policy field. The commerce ministry export committee has recommended that the government should impose export obligations or disincentive like reduction in import entitlements if large houses do not show significant increase in exports in the next 2 years. These large houses have continously excess net outflow of foreign exchange and their foreign exchange earnings, it is recommended that the two should be balanced within the next 3 years through export expansion. The Board of Trade at its meeting in early November has decided on the release of funds under the international price reimbursement scheme and on major modifications of the scheme and continuation of credit to exporters. This would be one means of the industrial units attaining the 1989-90 exports target of Rs. 25,025 crores. The ceiling of 10 per cent on excess imports under advance license scheme is to be increased. An 100 per cent income tax exemption for soft ware export houses is under consideration. Duty relief is being provided to leather and automobile industries on their imports of specific components and raw materials. Industry points out that on import savings that it can save Rs. 4100 crores, agriculture Rs. 1450 crores and agriculture processing Rs. 1000 crores in imports. US & EEC have informed India that trade in textiles should not be discussed in the Uruguay Round of GATT but in MFA. Director General of GATT, however, sees a good prospect for the gradual replacement of MFA, with aggregate tariff measures by affected countries — which will bring it under GATT. The government reports that FTZs have attracted Rs. 195 crores investment — Rs. 88 crores government and Rs. 107 crores from private sector. On individual items, farm exports in 1989-90 are expected to touch Rs. 500 crores. India's silk and silk garments exports are booming in Europe at Rs. 193.93 crores in the first six months and could exceed Rs. 400 crores for the year. Engineering exports for the six months of 1989-90 have risen to Rs. 845 crores (33 per cent) with the possibility of achieving the Rs. 2200 crores export target. Another increasing export area is spices which will reach its target of Rs. 301.2 crores for the year. Garment exports during January-September have reached Rs. 2342 crores which is an increase of 40 per cent and will cross the Rs. 3000 crores mark. The government reports that the approval for capital goods imports have shot up by 241.7 per cent in August 1989 compared to August 1988 — from 36.06 crores in 1988 August to Rs. 123.1 crores in August 1989. This run away growth of capital goods imports should be arrested. It can be and must.

Foreign loans and aid

Japan and India signed an agreement for an ODA loan of 91,144 million yen

(Rs. 1100 crores) as part of its Aid India Indian consortium pledge. Japan and India also signed an agreement in November for a grant of 600 million yen (Rs. 7 crores) for import of fertilisers to increase food production in the country. Norway states that it will maintain its aid level for 1990 as NDK 130 million (Rs. 33.7 crores). ADB is making a loan of $ 150 million to IFCI to promote medium scale industries in the country. AB SKF, manufacturers of ball bearings has decided to invest 800 million Swedish Kroner for 2 units in Bangalore and Pune. The government has contracted a short term debt of $ 4 billion at a high 20 per cent interest. The government states this loan is to be used for importing commodities in bulk.

International

IDA and World aid

IDA plans to have $14.5 billion as its next replenishment for the next 3 years. This was decided at a 2 day meeting of 24 countries meeting in Japan at the begining of November. This is important in view of the ILO report that the industrial countries get 70 to 75 per cent of all foreign direct investment, with US getting the largest share at 43.8 per cent ($43 billion), while the foreign investment in developing countries declined from 25 per cent of the total in 1985 to 21.2 per cent in in 1987. An UNCTAD study headed by former West German Chancellor Helmut Schmidt recommends a sharp increase in concessional assistance to help ease the debt burden of the developing countries. It notes with alarm that the developing countries have suffered a reverse flow of funds, while investment by the industrial nations have fallen from $20 billion in 1982 to $10 billion in 1986. In addition to recommending a sizeable increase in ODA, it calls for a doubling of loans by industrialised countries over the next 5 years and for this suggests a mechanism of automacity so that each donor country can raise its loan as a percentage of its GNP. The US is urged to reduce its massive fiscal deficit as part of the effort to solve the $1.2 trillion third world debt problem. This analysis is supported by an OECD report that borrowers from developing countries have lost interest in the international capital marget. It notes that the level of global bank lending has declined sharply and that countries like India, China and Venezuela have cut back their borrowing. In the first eight months of 1989 they have reduced the financing through bonds to $ 1.2 billion which was less than half of January-August 1988 borrowing. It states that the trend towards deregulation of domestic market, the removal of fiscal and regulating impediments and the development of new financial techniques might be taking away some of the advantage of the international capital markets and inducing them to return to domestic markets.

The Special 301 of the US

The US announced that it will not initiate any unfair trade investigations now against its 8 trading partner identified by it. Citing significant progress in bilateral negotiations, it announces that 3 of the original 8 South Korea, Taiwan and Saudi Arabia, — have been placed in a separate category. The other 5 including India will be revaluated in April 1990.

World Poverty

A World Bank staff paper on world poverty reports that in the past few decades, developing countries have made some progress in reducing infant mortality, extending education and increasing life expectancy, but these advances have not touched those at the bottom of the economic ladder. The poor education and health services are very important, particularly nutrition. Against the minimum of 2200 calories, the average food supply in Southern Africa is 2101 calorie, 1749 in Ethopia and 1927 in Bangladesh. This needs immediate attention. The World Watch Institute in Washington holds up as models the grass roots strategies in Kerala and West Bengal to fight poverty, which has increased globally during the 80s reversing the previous 30 years down trend. 1.2 billion people, according to it, live below the threshold of basic needs. Since the decade began 200 million have joined the rank of the poor. In this context, Kerala with per capita income one third below the Indian average, has twice the national average in literacy, its people live 11 years longer, its birth rate is one third lower and infant mortality two third lower, which is lower than that of Washington DC. It commends Kerala's health care record and holds it up as a model.

South-South Commission

The South — South Commission met in Delhi in early November and called attention to the need for collective self reliance of the countries of the southern hemisphere, the need for them to share their goods and services and safeguard and develop their traditional and acquired skills. It called attention to the concentration of the industrial countries on environmental protection and warned them against their becoming one sided. The Commission focussed attention on policies and action which have immediate relevance for the economic, political and social systems of all countries, notably the debt crisis which needs a debtors forum to ensure coordinated action among the Southern countries.

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II. Agricultural Development in Tamil Nadu

Paddy and other crops

The good rains of the North East monsoon in the state during November has been of help to the farmers all over the state in the growing of samba paddy in Thanjavur, Tiruchi and Tirunelveli districts and other late paddy crops in Chengai Anna and North and South Arcot districts. The problems facing the paddy farmers is water availability from Mettur after December. The millets are also growing well, with the farmers using quality seeds and a mix of manure and fertilisers. The cash crops of cotton and groundnut are likely to set new records with the moisture and water availability and absence of any pests. The government reports that at the end of November paddy procurement in Thanjavur district crossed the 1 lakh tonne mark against the target of 1.8 lakh tonne.

Research results

In November research results are five reports from TNAU on the importance of nursery management in the transplantation of rice to avoid root injury to the plants, on cultivation techniques to be used in scented rice varieties, as means of combatting white tip diseases of rice as well as the techniques of controlling rice earhead bugs and the use of a leak proof. PVC grain storage bin with 1 quintal capacity, from the Institute of Agricultural Sciences, Varanasi on the insecticides to be used to control the rice ear cutting caterpillar, from the maize research, station, Hyderabad on the agro techniques to be used for harvesting maize, from the agricultural college Baptala on groundnut, red gram inter-cropping in dryland farming tracts, from Kerala agricultural university on growing profusely the high oriental pickling melon variety, from CTCRI Trivandrum on fertilisers doses to be administered in cassava growing as nutrient management, from Alyamagai's agricultural research station on controlling the termite menace in coconut, from the Coconut Development Board, Cochin on the means of growing the various types of dwarf coconut hybrids in farmers' fields, from APAU, Tirupathi on means of controlling pests in red gram, from Sikkim on techniques to be used to increase wheat yield in Sikkim, from Sakthinagar on how sugarcane cultivation, preparation of soil and planting techniques contribute significantly to production, particularly the position of the buds while planting, from TNAU on means of combatting surface weevil threat to rainfed cotton, from Madras on the growing of callophyllem in ophyllem as a tropical tree being rich source of oil, from UAS Dharwad on a means of avoiding storage loss in garlic, from UAS Dharwad on the demonstration of combatting the leaf blight in arecanut, from the Myladumpanai Institute on combatting nematode menace in cardamom fields, from college of veterinary and animal sciences, KAU, Mannuthy on combatting disease among goats, from scientists at CIRC, Mathura on the managing of pregnant goats and new borns, from the Directorate of Agriculture, Madras on the results of the demonstration of VAM with rhizobium bacteria in the roots of pulses in increasing nodulation and nitrogen fixation, from the soil salinity institute, Tiruchi to increase green fodder production in sodic soils, from UAS Bangalore on combatting the diamond black moth which attracts cabbage, cauliflower, radish and other vegetables, from IARI New Delhi on plant protection of mangoes against pests, from KAU, Trichur on results of its research on inter-cropping cucumber, yam, amaranths with bananas, from CIAE Bhopal on the control of jack fruit pests at the larvae stage, and from the college of veterinary sciences, Hyderabad on countering salt poisoning in cattle.

Horticulture

The State government has drawn up a plan to provide infrastructural facilities to the horticultural estates with a view to increasing fruit and vegetable production. With the help of local growers, the available 54 lakh hectares including 30 lakh hectares dry land will now involve the dry land farmers switching over to horticulture and obtaining a regular income. Fruit production is to be increased to 35 lakh tonnes by the end of the VIII Plan from the present 26 lakh tonnes. In order to promote marketing and processing facilities, it is proposed to form a state

horticultural board. The state has been divided into 66 units each comprising 100 hectares where multi-cropping will be promoted. The cost of the scheme is Rs. 1.80 crores a year. The schemes extend to the tribal areas of Tirunelveli, Salem, South Arcot, Vellore Ambedkar, Tiruvannamalai, Sammuvarayan, and the Dharmapuri districts of the state.

Coffee

The coffee situation is confused as seen in the agenda of this year's coffee conference when the ICO discussion, the question of minimum release price, export marketing, purchase tax, excise duty are not being considered. There is to be an indepth analysis of technical subjects and the scientific aspect of the crop. This means that the development in the international coffee market will have long term impact on the industry and its profitability. Both UPASI and the Karnataka Planter's Association have expressed doubts about the ability of the Coffee Board to adapt to these changed international market conditions. Even so, some positive steps have been taken such as the benchmark survey of production costs that the Union government had promised has now been completed which should enable an early increase in MRP. Also the increased capacity for the manufacture of instant coffee could also help expand the domestic market. Even so, the slow growth of the domestic market cannot compensate the growers even partially for the lower returns from exports. Hence it has been suggested that the question of letting the growers market atleast a portion of their produce in the open market instead of the present practice of selling the whole coffee production to the coffee board be considered favourably. This may expand the domestic coffee market through the sales efforts of suppliers. This has been opposed by the coffee board as being against the interest of small growers. But in the present situation, the Board is not in a position to help any producer — big, medium or small. UPASI states that it is developing a scheme which will offer marketing freedom to growers, while protecting the interests of the small growers. This scheme should be allowed by the Board to operate even on a pilot basis.

Tea

Tea production which at one time looked like declining now pointing to the possibility of reaching the 1987 or 1988 level as a result of improved weather conditions, particularly in South India where production had fallen sharply at June end. The crop prospects in the North East have also improved, so that now 1989 production is estimated at 690 million kgs against 1988's 702 million kg. Due to the severe losses of the crop in Sri Lanka, the world production will be atleast 30 million kg lower than in 1988. With a 4 per cent anticipated rise in domestic consumption, the domestic market will absorb 490 million kg, for exports. Till August end 1989, Indian tea exports at 105 million kg were level with 1988, but due to the shortfall will not reach last year's 230 million kg. The irregular trend in tea output, exports and value realised is brought out in the table below :

There are two problems facing the tea situation in the country. First, a long term problem is the need to increase tea production and its productivity, which despite the increase in new plantings in Orissa and the North West has not

Year	Production	Consumption	Export Quantity (million kg)	Value (in crores of rupees)
1980	569	345	224	420.03
1981	559	318	241	434.25
1982	560	370	189	355.55
1983	581	373	208	516.81
1984	645	428	227	740.76
1985	657	434	222	711.91
1986	624	418	206	601.00
1987	673	463	210	639
1988	700	479	221	674
1989	690	470	220	750

caught up with the demand which is increasing 3.5 per cent annually while production is only around 2.5 per cent. This should also reduce the irregular trend in output and exports. The short term problem is how to increase production now. Here the question of import of tea has been raised, of about 30 million kg a year to meet both domestic and export commitments. There will be no net outgo of foreign exchange on this import if it is to further increase the value added tea, as Sri Lanka has done so successully. One problem is about tea prices which the government think is too high and is taking action to bring down, whereas the producers say it is low and falling.

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III. Industrial Development in Tamil Nadu

Industrialisation in the state

The pioneering unit concept introduced by the government a year ago (see Vol. XVIII p. 573) to attract investment in backward areas has not yet taken off. Despite the fact that the newly elected government in May 1989 announced special subsidies/incentives for the pioneering units. One reason for the delay is that the long term strategic planning committee has not yet issued the necessary guidelines to implement the scheme. The scheme has evoked good response

but the state's agencies have not been able to process the applications in the absence of guidelines. The delay is endangering the whole scheme which has only a life of 18 months and already a year has passed since its announcement. The scope for the scheme is large as the original 34 backward taluks has been expanded to 103 taluks as being eligible for state subsidy and other concessions. There is need for early action on the guidelines.

ONGC and Cauvery basin

ONGC's major hydro carbon strike in the Cauvery region are the discovery at Adiyakkamangalam, Nannilam, Bhuvanagiri, Kovilkappal and Narimanam on inland and PY-3 in offshore. The production during the first 6 months April-September 1989-90 has increased sharply from 200 tonnes per day in April to 700 tonnes per day by September. The target is a total production of 2 lakh tonnes by the end of the year, March 1990 against the current 92,000 tonnes. In addition to the current production from the above 4 structures, drilling is in progress at 5 new structures — Thirukadaiyur, Needamangalam, Vattikadu, Mangudi and Kottankudi on land. The throughput target is 2000 tonnes a day against the current 220 tonnes. The PY-3 and 4 exploratory wells have established oil reserves of 22 million tonnes. Apart from the use of the gas in the Cauvery, there is urgent need for building a southern gas grids, using the plentiful gas of western region (which is being wastefully flared upto Rs. 350 crores a year as noted earlier) so that the power needs of the south — especially Karanataka and Tamil Nadu are met. In this connection the ONGC aunounced that the report on the Cauvery gas grid will be ready by January 1990 and that the grid will supply gas to power, steel, silicate and other industries is welcome.

CECRI

The Central Electro Chemical Research Institute (CECRI) reports that it has developed a number of new technology projects in its area, including maintenance free batteries, alternative production techniques for aluminium, special chemicals, technology and rapid modernisation of infrastructural facilities along with development of biosensors for glucose and urea chlorestoral. It has projected the technology for producing magnesium from sea bitterns which will increase the revenue to the salt industry. Its modula cell uses 30 per cent less energy than the conventional cell, which has been commercialised by TIDCO in a captive 600 tonne per annum magnesium plant. It reports developing a process for extracting gallium from the bayer layer at the aluminium manufacturing unit, MALCO. Its work on monitoring and controlling corrosion of bridges is becoming mandatory for the Ministry of Surface Transport.

State PSU and TAPCO

The state public sector units are facing a crisis marked by mounting overhead costs, steady decline in operational income and growing interest burden. Their problems have been intensifed as the State government is diversifying its field of activities comprising agriculture, trading, and constructions. The turn over growth at Rs. 1144.24 crores in 1983-84 and Rs. 1981.13 crores in 1987-88 is lower than the investment growth which was Rs. 749.74 crores in 1983-84, Rs. 1526.90 crores in 1987.88. But on

the positive side, there has been a steady growth of cash profits from —Rs. 18.95 crores in 1983-84, —13.77 crores in 1984-85 to +21.99 crores in 1985-86 and Rs. 71.11 crores in 1988-89. But because of increased provision for depreciation interest, the net loss during this 5 year period has gone up from Rs. 53.69 crores to Rs. 67.17 crores. Of the cumulative investment of Rs. 1526.90 crores upto 1987-88, 41 per cent came from the state government, 20 per cent from TIIC, 15 per cent from TNTC and smaller percentage from SIPCOT, TNCST. During 1987-88, 3 promotional agencies, SIDCO, TIIC, SIPCOT have been faring well and the Warehousing Corporation reports a net profit of Rs. 304.41 lakhs, and TAMIN a profit of Rs. 9.90 crores mainly through exports. The Transport Corporation are doing badly with a loss of Rs. 23.86 crores for 1987-88. The net loss of 63 public sector units in 1987-88 rose by Rs. 18.36 crores to Rs. 67.17 crores in 1988-89, with Tamil Nadu Newsprint topping the losses at Rs. 17.4 crores followed by Tamil Nadu Civil Supplies Corporation (loss of Rs. 15.47 crores) and TANSI (loss of Rs. 2.84 crores). The State Audit Board calls attention to the uneconomic and inefficient working of Tamil Nadu Poultry Development Corporation (TAPCO) which has incurred a cumulative loss of Rs. 62.97 crores upto 1985-86, eroding 88.7 per cent of its paid up capital. It states that the unit has made little impact on the poultry scenario, has not done extension and has not mobilised institutional finance. It recommends urgent measures to be undertaken to achieve its clearly stated socio-economic objectives.

Electronics & SIPCOT

The Department of Electronics (DOE) has decided to help the state electronics industry in 3 areas — quality, R&D and electronic exports. In electronic exports, the current trend to spend more foreign exchange through imports than earning it can and should be corrected by boosting exports. The locale of Electronic Trust and Development Centres of the Department is to be strengthened in the new building to be constructed on the land alloted to it by the State government. The government states that it is streamlining SIPCOT on the basis of the evaluation and recommendations of the unit by the Administrative Staff College, Hyderabad. It has done an excellent job in implementing various incentive schemes and developing growth centres. But it is also burdened with many other functions like providing financial assistance and various support services to entrepreneures. These, it is recommended, may be given to other agencies so that SIPCOT can concentrate on its promotional role.

Cement, sugar and pig iron

The cement plants in the state are facing hard times, with over supply, falling demand which has hit those which have not modernised themselves with falling offtakes and piling up of stocks. Even modernisation has its price. Units like Chettinad Cement, which has executed Rs. 75 crores modernisation, now has to earn Rs. 12 crores in interest and depreciation + cover its production costs. The industries point out that the price of cement in the open market has remained constant at Rs.70-72 per bag and there are still no takers leading to distress sales. The state units are not able to compete with the modernised AP plants, and are working at 70 per cent capacity and even so have 20 per cent of the output as surplus. Exports could be one

solution, but the external price is much lower than the domestic price and so even though there is a foreign demand, it cannot be met at international prices. On the sugar front, the State government in its orders dated October 21, 1989 has addressed the sugar mills to pay a minimum price for sugar cane of Rs. 250 per tonne linked to 8.5 per cent recovery for 1989-90. This is Rs. 50 above the union fixed price (see last issue). A premium of 29.4 paise per quintal for every 0.1 per cent increase in sugar recovery above 8.5 per cent is to be paid. On the foundries front, pig iron scarcity and delay is hampering their functioning seriously. There has been two years indecision and wrangling as to who should import pig iron, whether foundries in SSI should get imported pig iron through SAIL or SIDCO. This bureaucratic approach delays everything. In addition, the units complain of SAIL's arbitrary allocation of pig iron and other iron to engineering industries, specially foundries. They want the iron and steel controller to decide on fixing pig iron entitlements.

Private sector reports

EID-Parry report for 1987-88 states that it has increased internal resources by Rs. 7.09 crores because of effective functioning. Improved working results were achieved with higher sale of 85011 tonnes of ammonia phosphate, 42,949 tonnes of super phosphate. The quantity of cane crushed fell from 8.41 lakh tonnes to 6.87 lakh tonnes due to the drought. But of the total turnover of Rs. 206.73 crores, sugar sales were Rs. 36.09 croras, fertiliser Rs. 24.62 crores and sanitary Rs. 13.97 crores — which is a good record. The resources gross of Rs. 53.10 crores have enabled it to modernise the plants adequately.

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IV. Education, Science & Health

Educational reforms

The Computer Literacy And Studies in Schools (CLASS) started with enthusiasm five years ago has now become quiescent. That the 3 agencies — Ministry of human Resources Development, Department of Electronics and NCERT — which claim responsibility for its operation have each been pulling in different directions has meant that it has lacked direction and has been dealt with by the government in an amateur way. Despite being one of the first countries in the world to focus on computer literacy, the project now is neglected between the end of the VIII Plan and the start of the VIII Plan. The Programme of Action of the Education Policy on Education 1986 visualised a provision of 10,000 micro computers to 10,000 schools, but the economics of the project has not yet been worked out after 5 years. The ministry, wants to keep control over the project which needs a certain degree of pedagogic and scientific freedom. The State government states that it is formulating a chain of training programmes to tone up the competence of school teachers in the +2 schools. The programmes are to cater to the training of

teachers in both rural and urban areas. The importance of giving priority to primary education in the state, where many schools have no teachers or building has been emphasised, particularly when Rs. 125 crores is alloted by the state to higher education which has produced a learning system, where only 49 per cent of students passed in BA, 62 per cent failed in BSc. and only 7.5 per cent to 8 per cent passed in MSc examination, as pointed out by the chancellor. UGC has announced that those with MPhil and PhD. degree need not take the eligibility test for recruitment of lecturers till 1990 and 1992 respectively. There should be no centralised test like this and so the exemption granted is meaningless.

Satellite

During November, there was trouble with the use of the crippled satellite I-C. So the transponders needed to be switched to I-A whose life is nearly over. It is hoped that the new satellite will avoid the troubles and faults which have dogged the Satellite I series.

Technical education

There is a deal of confusion in the technical education area over the question of recognising of self financing engineering colleges. As reported in the past issues of the Bulletin on this question the State government, the University of Madras, the High Court of Tamil Nadu and the All India Council of Technical Education are taking different and confusing positions and students and the parents as a consequence have been suffering. Now the All India Council of Technical Education should take up this matter and decide on the status of the 4 self financing colleges which are in question (see Vol. XVIII p. 541). They should take a position and clear up the question on who is the engineering authority competent to recognise or grant affiliation to these colleges. The question has arisen again in relation to the 2 new self financing colleges, — the SRM Engineerihg College, Kattankulathur and the Hindustan College of Engineering Padur and the courses that they have advertised in the newspapers. ICAR announced that every district in the country (450 against the 104 district Kendras) will have a Krishi Vigyan kendra (KVK) during the VIII Plan and all ICAR transfer of technology projects will be merged with the Kendras (KVKs). The KVKs are to serve as the light houses of the universities and institutes of the state agricultural department. Each Kendra is allocated Rs. 75 lakhs in the VIII Plan against Rs. 35 lakhs in the VII Plan.

Science

The Prime minister's Science Advisory Council (SAC) has come out with uew directions in planning to help reap maximum benefits from S&T. In its document, Science and Technology in the VIII Plan it covers food productivity, population control, technology development, materials management and science and technical education. It has also emphasised the importance of diffusion of science and technology infrastructure in the states and UTs in a new direction. The chairman of the council has also expressed serious concern over the indifferent quality of much that passes as research in the academic system. Apart from inadequacy of a foundation in substantive knowledge in the subject area, the research

scholars lack competence in critical areas, like experimental skills, ability to read scientific literature, interdisciplinary knowledge and skill to write scientific, articles. There is lack of a system of committed scientists. The whole system of research therefore calls for a thorough going reform, including the research degrees of Ph.D and D.Scs.

Health

The Union government reports that it has 33 ICDS projects in Maharashtra in 1989-90. With that the total ICDS projects in that state has increased to 155. Each project provides supplementary nutrition, immunisation, health check up and regional service to children below 6 and pregnant and nursing mothers, free school education to children in the 3-6 years age group and health education to women in 15-45 years age group.

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V. Employment and Labour Relations

The Prime Minister towards the close of the General Election announced a Rs. 5000 crore employment package for women. The announcement has been caught up in a controversy as to whether the announcement was a violation of the Election code which bans any offers like the this by the government just before the election. Moreover it is not clear as to the details of the project, whether it is a new programme, and if so, where the money is to come from. Awaiting further clarification the discussion on it should be postponed. The new integrated insurance cum accident relief scheme introduced by the state government in August 1989 for the benefit of unorganised labour is an improved version of the 3 schemes operated earlier from 1984. This scheme has 3 additional features. The income ceiling of Rs. 3500 a year has been removed; the collection of Rs. 10 per month from the beneficiaries is lifted ; it provides for death relief when a worker dies whether the person was at work or not. The Union government reports that over 3 lakh house sites had been provided to rural landless families as construction assistance given to 3 lakh families in the 5 months April-August 1989. With this, the total alloted house sites since the scheme's inception in 1971 comes to 169 lakh and the amount of assistance of Rs. 75 lakhs. The October 1989 issue of the Indian Labour Journal reports on the socio-economic conditions of women workers in building and construction industry in Delhi, Bombay and Madras which is the unorganised sector as : a) about three fourths of women of workers were below 34 years, with 51-96 per cent of them being unmarried : b) Illiteracy among them is widespread — all the women workers in Bombay, 147 out of 148 in Delhi and 80 per cent in Madras. 79 per cent of women workers in Delhi and 39 per cent of the 45 children in Bombay were not attending school. In Madras two thirds of the children were at school : c) there was no trade union among them : d) on an average, the family of each worker

consisted of 3.6 persons with 2.1 earning per family in Delhi and 1.5 non earners in Delhi and Madras and 2.2 and 1.4 in Bombay ; and e) the sampled women workers' households on average earned per month Rs. 1061.61 in Delhi, 1177.94 in Bombay and Rs. 1022.54 in Madras. As they were employed only for 7 or 8 months, the average household earning was Rs. 700-800 per month.

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V. Other Items

State Planning Commission

There were 5 meetings of the State Planning Commission in November to review the report of the task force reports on Rural Development, Water Supply and Housing, Urban Development, Poverty and Unemployment and a group on tourism, statistics and other services. On the basis of these reviews, the relevant chapters are to he drafted.

IIC

The National Seminar on the Mid Year Review of the Economy 1989-90 was held at the India International Centre towards the end of November. There was some review downward of the prognosis of growth, particularly because of the slow down of manufactures. There was general agreement that the pressure points of the economy which need urgent attention are inflation, the government's fiscal deficit, and the balance of payments position. They are all interconnected and call for macro economic policy change.

SRC & TNBCE

The bimonthly meeting of the governing body of the State Resource Centre was held towards the end of November The work on the integrated literacy manual was reviewed and the chairman was asked to examine critically the need for yet another manual. The mass functional literacy programme using students for the coming summer was reviewed and it was agreed that the kits for use should be limited to students (NSS) in + 2 and a few selected colleges only. A draft manual on office procedures was placed on the table and the chairman was asked to appoint a panel to examine it. The executive committee of TNBCE also met and reviewed the successful annual conference at Madurai. It decided on plans to launch the International Literacy Year programmes in Tamil Nadu. It also decided against a solemn function in early January to inaugurate the International Literacy Year in 1990.

AIR & Boston School

AIR organised a broadcast on a little discussed subject — urban poverty. Its dimension at the macro and micro levels were discussed, and its increasing numbers recalled. The remedies are both short term such as the recently started SEPUP and the recently proposed Jawahar Rozgar Yojana, which could

provide relief to one quarter of the urban poor and long term programme to combat rural poverty because urban poverty is essentially a spillover of rural poverty and to organise the informal urban sector to become an ancillary to the formal urban sector. The Boston Higher Secondary School celebrated the conclusion of the Jawaharlal Centenary Year by observing the UN Declare — International year of the female child towards the end of November. This declaration needs to be implemented by all countries, all districts, towns and villages in order to 1) right the discrimination suffered by girls from their birth ; 2) to increase the employment and educational opportunities for them by a system of reservation for a period of time, and 3) by motivating them to adopt the small family norm and the proper spacing of children.

First Article

A paper, 'Perspectives for Chemical and Petro Chemicals in Tamil Nadu' by P. K. N. Panicker, used at the workhop on Perspectives of Industrialisation of Tamil Nadu, appears as the first article.

Second Article

A note, Competitiveness in the Private Sector in the Eighth Plan, appears as the second article.

M I D S News

On the invitation of the Central Planning Commission, Dr. A. Vaidyanathan has joined the Planning Commission as a full-time member.

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Dr. Nirmal Sengupta has taken over Acting Directorship of the Institute effective 3rd January, 1990.

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Mr. K. Gopalan has joined the Institute as Head of the Evaluation Unit for Evaluation of Adult Education Schemes in Tamilnadu.

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Dr. Paul P. Appasamy attended the "National Conference on the International Debt Crisis" held from 11th December 1989 organised by the Centre for Research to New International Economic Order, Madras and served as chairperson for one of the sessions.

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Dr. P. Balakrishnan who is likely to join the the Institute Faculty in early 1990 visited the Institute and gave a seminar on "Modelling the behaviour of Manufacturing Prices in Indian Economy" on 3rd January.

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Dr. K.K. Bhargava, Secretary General of South Asian Association for Regional Cooperation (SAARC) had an informal discussion with faculty members on 6th January.

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The Public Viva Voce Examination of Mr. K. Bharathan, Part-time Ph.D. scholar was held in the Institute on Thursday, 4th January. Prof. V. M. Rao, Institute for Social and Economic Change, Bangalore and Dr. C. T. Kurien, Supervisor of Mr. Bharathan's Ph. D. work conducted the Viva Voce Examination which was attended by about 25 scholars from the institute and neighbouring institutions.

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The Nineteenth Annual Meeting of Social Scientists was held on 6th January. It was attended by 21 participants drawn from different disciplines in social sciences of South Indian Universities. For the first time, School of Management Studies, Cochin University and Agricultural College, Madurai were represented. Apart from the usual theme of the Teaching and Research in Ph.D. Programme, Evaluation Procedures in Post-Graduate Courses were reviewed in this year's workshop.

Two papers were specially prepared. One by Prof. S. Neelakantan of the Department of Economics, Bharathiar University and the other by Prof. Dharenendriah of the Psychology Department of Karnatak University. The papers were meant to set out main features of the current evaluation procedures for PG courses, the directions in which they need to be improved, and also indicating measures for making the teaching community more responsive to the problems in this area. These two papers were intended to set the agenda for discussion at the meeting. Thereafter the participants reviewed their experiences with reference to those theme papers.

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Perspectives for Chemicals and Petrochemicals in Tamil Nadu

by

P.K.N. Panicker
Vice President, Chemical Industries Association

Even in the 1950's, industrial development of a country could be gauged by the level of production of bulk inorganic chemicals like sulphuric acid, caustic soda, soda ash and the like. Tamil Nadu had its share in the overall Indian context (Table-1). However, the orientation rapidly shifted and today the major indicator of chemical industry growth is the production of petroleum based building blocks such as Ethylene, Propylene, Butylene, Benzene, Toulene, P-Xylene, O-Xylene etc. and the down stream petro-chemicals such as PVC, LDPE, HEPE, DMT, Polystrene, VAM etc. It is, in this context, the task force in 1972 appointed by the then Government of Tamil Nadu, stressed the need of a petro-chemical complex in Tamil Nadu. The recommendations of various scientists, technologists and industrialists and scientific and professional associations in this region have so far not yielded any positive result. While making this statement, the proposed aromatic complex at Manali is not being forgotten. The aromatic complex though welcome, can only be considered as a very poor substitute for a petro-chemical complex based on a naphtha cracker. The potential for diversified array of down stream possibilities both in medium and large sectors offered by a cracker cannot be substituted by the aromatic complex.

Pattern of development

Since 1950, a few chemical industries which could be broadly classified as petro-chemical units have come up in Tamil Nadu (Table - 2 & Table - 3). All of them started either using substitute feed stocks like alchohol for production of ethylene or acetaldehyde or depending on feed stocks brought into the State from far off places like Bombay and Gujarat.

Petrochemicals

Petrochemicals can be broadly categorised as follows :

i) Plastics such as low density and high density polyethylene, commonly known as IDPE & HDPE, Polypropylene, polyvinyl chloride which are commonly known as PP & PVC Engineering plastics like Polyacetals and Polycarbonates.

ii) Synthetie Rubbers (such as styrene butadiene rubber and polybutadiene rubber, which are commonly known in the abbreviated form SBR and PBR)

iii) Synthetic fibres (such as nylon, polyester and acrylic)

iv) Intermediates (such as ethylene, propylene, benzene, DMT, Caprolactum, methanol, pthalic anhydride, poly urethenes, polyols, glycols, acetaldehyde etc. which in turn are used in the manufacture of various chemical and finished products).

Status

Petrochemical industry though was not making much headway during the last few decades, as anticipated by techdologists in this region, this sector seems to have really taken rapid strides during the last four or five years and the domestic production of various petrochemicals has registered impressive growth (table-4). In the case of synthetic fibres, not only has the country attained self-sufficiency, but we are also in a position to export significant quantities. Similarly with the commissioning of new capacities, the country has achieved self-sufficiency in LAB which is used in the manufacture of synthetic detergents and near self-sufficiency in DMT/PTA which are the main raw materials for polyester. Production of polymers is not adequate to men indigenous demand in full. While on a short-term basis, the shortfall is being made up by imports, additional capacities for the manufacture of these products are being established.

Feed Stocks

Petrochemicals are produced from petroleum feed stocks like naphtha, gas, kerosene and also from alcohol and calcium carbide. At present naphtha is the dominent feed stock in our country. Gas is slowly gaining ground. Alcohol and chemicals contribute substantially. However use of calcium carbide is constrained due to the fact that the route is energy intensive.

i) *Petroleum Products*

The country consumes a little over 46 million tonnes of petroleum products, and the consumption is steadily on the increase. Out of this approximately 18 to 19 million tonnes is being imported into the country and around 2.5 million tonnes is being exported. However when we look at the petrochemical potentials, it has to be realised that the country has surplus naphtha available which at the moment is being exported probably at unremunerative prices (Table-5). The surplus naphtha is indeed a very big source on which petro-chemical developments can be based.

ii) *Natural & Associated Gas* :

Natural and associated gas is also slowly emerging as an important

petrochemical feed stock. The present thrust seems to be to maximise use of gas for fertilizer. No doubt, two fairly big gas crackers are coming up in the western region. There is no reason why gas, even though obtained in small quantities, as in Godhavari and Cauvery basins should not be used as chemical feed stock. Perhaps installation of small 'Partial oxidation crackers, near the place of gas availability and with selective product mix to suit local requirements can be effectively planned. Advantages are that investments are of low order whereas the products which again are petrochemical building blocks will open up possibilities of variety of medium sized end products.

iii) *Coal based Aromatics*

While we talk of naphtha and gas based aromatic production and aromatic complexes, we often overlook coal based production of aromatics. Out of the 12 units in the country producing aromatic feed stocks, 6 are coal based attached to steel plants. There contribution to petrochemicals is in no way small (Table-6). Mecon's studies for maximising recovery of these products will hopefully lead to positive steps.

v) *Industrial Alcohol*

India is the only country that has given definite thrust to molasses base alcohol as substitute petrochemical feed stock. The rapid improvements in the standards of living of our people as reflected by the rapidly increasing demand for sugar and the possibilities of doubling sugar output during the next decade through improved agricultural inputs promise a big leap in the field of alcohol based chemicals (Tables-7 & 9).

Potentials for growth

It is appreciated that petrochemicals can contribute to the growing needs of synthetic fibres, agricultural inputs, housing materials, storage and efficient management of water, nutrients, drugs and pharmaceuticals, transportation and communication and infact to almost every field of human activity. Perhaps the challenges faced by the large and growing population and their growing aspirations for increased level of comfort can be met only through a planned and effective growth of chemical and petrochemical industries. How far we are backward in this area can be understood when we compare our production of one basic petrochemical building block, Ethylene with that of other countries (Table-8).

The amount of foreign exchange spent on import of petrochemical products in 1985-86 was Rs. 450 crores which rose to Rs. 600 crores in 1986-87 and touched Rs. 1000 crores in 987-88. In 1988-89, the import bill is expected to be even higher.

Government of India seems to be fully aware of the importance of chemical and petrochemical developments and seems to be planning ahead with certain definite perspectives and goals. The trend is indeed welcome. Targets for petrochemical developments are in the right directions (Table-10).

Constrainst like undue delay in granting clearances, administrative controls and approvals causing delays in the

implementation of projects beyond reasonable limits of around 36 months in case of petrochemical complexes involving investments of above thousand crores, lack of definiteness in supplies of feed stock, fuel and energy and frequent changes in the duty structure are constraints that are to be seriously taken note of and removed. In most cases, value addition from naphtha to the end product ranges between 6 to 10 times. Hence encouragement to conversion of naphtha to end products within the country is an inevitable necessity in the long term perspective. Industrial location policy based on scientific considerations tempered with the necessity to satisfy the regional aspirations is necessary for balanced growth of the industry and to maintain the federal structure of the country. Government of India seems to be aware of the necessity for growth oriented approach and seems to be proceeding with definite plans, perspectives and goals in the matter of chemical and petrochemical industry (Table-10).

Position of Tamil Nadu

It is in the context of the overall India scenario that we have to assess Tamil Nadu's contribution to the chemical and petrochemical areas. As pointed out earlier, Tamil Nadu did have a certain momentum in the earlier days with respect to the inorganic chemicals. Later a beginning was made with respect to certain petrochemicals. However the initial momentum seems to have been completely lost during the last decade. A complete study of the situation and *a bold and imaginative programme* to re-establish the lost vitality is necessaay. It is in this context that the Chemical Industries Association took the initiative to draw the attention of the Government technologists, industrialists and entrepreneurs within the State and also at the central level on the immediate necessity to vitalise the slagging industrial activity in the State. The first *seminar organised by the Association* in April 1982 took opportunity to review the recommendations of the 1972 task force and presented certain perspectives. Thereafter the Association continuously urged the necessity of a petrochemical complex in Tamil Nadu so that further growth in the area can be spurred and the momentum gained. Unfortunately, our efforts havs not yielded results in the the desired measure. Today when we look at the possible contribution that Tamil Nadu will be making in the newer thrust areas of petrochemicals, we find that situation is not a laudable one (Table-11).

Suggestions

Having analysed the present situation and looking ahead, the following areas seems important enough to be considered and studied in detail.

1. *Basic Inorganic Chemicals*

It is necessary to constantly review the position and augment the capacities to catch up with All India level of activity. With this in view it is suggested :

i) Establishment of sulphuric acid and super phosphate unit in Dharmapuri area.

ii) Capacities of sod ash and caustic soda to be reviewed and increased.

iii) Possibilities of establishing one more news print unit based on baggasse to be studied.

iv) Establishment of a titanium dioxide unit.

2. *Alcohol based units*

Considering the potential for establisment of more alcohol and alcohol based units, suggestions are :

i) Expansion of existing distilleries

ii) Establishment of 4 more distilleries with minimum capacities of 50 KL/day.

iii) Expansion of existing Acetaldehyde/Acetic acid units

iv) Establishment of two more acetic/Anhydride units

v) Establishmenr of two Butanol/Butyl Acetate units

vi) Establishment of one Aceto Acetic Esther unit

vii) Establishment of one VAM unit.

3. *Naptha Cracker*

Establishment of a petrochemical unit based on naphtha and down stream product lines as listed in Table-12.

4. *Gas based Units*

It is seriously suggested that possibilities of installing a partial oxidation cracker with an investment of Rs. 60/70 crores in the Cauvery belt should be studied. Based on the product mix from the cracker, 3 or 4 down stream units such as Acetylene Black etc. also can be effectively planned.

Establishment of a Methanol unit and a Merchant Ammonia unit seems to be very necessary for the development of various medium sized chemical and pharmaceutical units.

5. *Gas Grid* :

It is also suggested that the Government of Tamil Nadu should enlist the co-operation of all the southern states far the establishment of a National Gas Grid which can definitely help much more rapid industrialisation of the region as a whole. With the establishment of the Godhavari and Cauvery delta and the recent announcement that petroleum and gas is available in the south western coast, National Gas Grid seems to be within practical feasibility.

Conclusion

In conclusion it may be stated that Tamil Nadu lost valuable opportunities during the last decade and only concerted and imaginative approach can set things right. The State offers sufficient resources which can really be mobilised, if State Government can work in close co-operation with technologists, industrialists and entrepreneurs in the region and also enlist the co-operation of the other states in the region to create effective thrust and dynamism in the industrial development of the region so that we can enter the twentyfirst century with creditable achievements, not only in the area of chemical and petrochemical industries. but in improving the general standard of living of our people.

Acknowledgements

The author is thankful to his colleagues in the Association namely Mr. S. Krishnaswamy, Dr. D. M. Mohunta and Mr. N. Venkateswaran who have helped in the collection of data and formulation of the views presented.

TABLE 1

Existing Basic Chemical Industries in Tamil Nadu (1985)

Name of chemical	Installed capacity (annum)		Number of units		Percentage of installed capacities in Tamil Nadu
	India	Tamil Nadu	India	Tamil Nadu	
Sulphuric Acid	4,000,000T	176,000T	90	10	9.40
Caustic Soda	815,444T	149,700T	36	3	18.35
Soda Ash	694,600T	66,000T	5	1	9.50
Calcium Carbide	167,250T	10,000T	7	1	5.98
Pottassium Chlorite	16,150T	4,200T	9	3	26.00
Carbon Black	105,700T	—	5	—	—
Industrial Explosives	310,000T	15,000T	21	1	4.80
Acetone (Defence units not counted)	70,000T	—	5	—	
Phenol	76,000T	—	4	—	
Methanol	44,000T	—	2	—	
Citric Acid	4,500T	—	2	—	
Industrial Alcohol	400M.T.	63M.T.	130	9	15.88

M.T. = Million Tonnes
T = Tonnes

Source : P. K. N. PANICKER, Chemical Weekly April, 1986.

TABLE 2

Petrochemical Units in Tamil Nadu — Existing and Under Implementation

Name	Produt	Capacity Tonnes/Annum	Raw materials used	Basic Building Block	
				Name	Require-ment T/A
Existing					
Chemicals & Plastics India Ltd.	PVC	20,000	Ethyl Alcohol	Ethylene	16,000
Plastics & Resin Chemicals Ltd.	PVC	13,000	Ethylene	Ethylene	10,400
Indian Organic Chemicals Ltd.	Polyester	12,000	DMT Ethylene Glycol	—	—
Shriram Fibres Ltd.	Nylon	7,000	Caprolactum	—	—
Thirumalai Chemicals Ltd.	Phthalic Anhydride	14,000 (Expansion include)	O-Xylene	O-Xylene	18,000
Southern Petro Ltd. (TIDCO)	LAB	80,000	—	C10 C12 Benzene	74,600 29,000
Chemicals & Plastics India Ltd.	Poly Urethane	6,000	Polyols TDI	Propylene Toluene	1,000 2,000
Under Implementation					
Kothari Chemicals & U. B. Petrochemicals	Propylene Oxide Propylene Glycol	12,000	Propylene	Propylene	12,000
	Polyols	6,000	—	Propylene	2,000

Source : P. K. N. PANICKER, Chemical Weekly, April 1, 1986.

TABLE 3

Requirement of Basic Building Blocks for the Units Listed in Table-2

	Tonnes/Annum
Ethylene	26,400
Proplylene	15,000
P—Xylene	—
O—Xylene	18,000
Benzene	29,000
C10 C12 Fraction	74,600
Toluene	2,000

Source : P. K. N. PANICKER
Chemical Weekly April 1, 1989.

TABLE 4

Petrochemicals : Production, Import & Consumption

Products	Production 1970-71*	Installed capacity 1989	P	1988-89 I**	C	('000 tonnes 1989-90 Production Target
1	2	3	4	5	6	7
Synthetic Fibres	5.4	175	110	—	90	140
Polyester Filament Yarn	0.6	89	146	—	146	170
Nylon Filament Yarn	9.4	49	35	24	59	40
Acrylic Fibre	9.4	35	26	12	36	30
Total	24.8	348	317	36	331	380
Fibre Intermediates						
P-Xylene	—	116	120	50	170	NA
MEG	4.5	30	25	85	110	NA
DMT/PTA	—	235	250	20	270	250
ACN	—	30	25	5	29	27
Caprolactam	—	20	20	80	100	NA
Total	4.5	431	440	240	679	—

Table 4. Contd.

Products	Production 1970-71*	Installed capacity 1989	P	1988-89 I**	C	('000 tonnes 1989-89 Production Target
1	2	3	4	5	6	7
Chemicals						
Benzene	53.2	235	150	—	150	NA
O—Xylene	—	27	24	51	75	NA
LAB	—	150	125	—	120	145
Ethylene Oxide	1.5	—	15	—	15	NA
Methanol	—	157	145	NA	NA	NA
Toluene	8.4	45	35	9	44	NA
Phenol	—	61	46	—	46	NA
Total	63.1	675	540	60	450	—
Polymers						
LDPE/LIDPE	24.4	80	80	93	173	80
HDPE	21.1	50	42	100	142	40
PP	—	55	40	26	66	45
PVC	41.4	150	132	107	239	130
PS	8.9	28	22	23	45	23
ABS	—	7	6	2	8	NA
Total	95.8	370	322	351	673	—
Elastomers						
Poly But Rubber	—	20	16	8	24	16
SBR	29.8	33	32	8	40	30
BUTI	—	—	—	16	16	—
Nitrite	—	—	NA	NA	2	NA
Total	29.8	53	48	32	82	—

Source : *Chemical Weekly Annual — 1985;
**As in annual report of the Dept. of Chemicals & Petro Chemicals 1989.

TABLE — 5

Production of Petroleum Products in India — 1986-87

('ooo tonnes)

Products	Production	Consumption	Import	Exports
Total Production	42,761	43,662		
1. Light Distillates of which	9,069	7,412		
LPG	995	1,497		
Mogas	2,515	2,505		
Naphtha	5,437	3,249	34	2,220
2. Middle Distillates of which	23,324	25,656		
Kerosene	4,912	6,456		
ATF	1,553	1,603	108	
HSD	15,450	16,009		
LDO	1,172	1,156		
3. Heavy ends of which	10,368	10,594		
F.O.	3,864	3,793		
Fuel Oils (Total)	8,011	8,047		
Lube Oils	491	755	219	
Bitumen	1,325	1,309		
Petroleum Coke	264	208		
LPG	494	—		

Source : Chemical Weekly
Annual Number 1988

TABLE 6

Aromatics from Steel Plant

('ooo tonnes)

	Benzene	Toluene	Xylene
1. Potential availability	86.46	14.6	2.20
2. Actual production in 1987-81	14.02	2.4	0.28
3. Projected production for 1999-2000	70.45	11.72	1.64

Source : Anand P. Raman.

TABLE 7

Estimation of Alcohol Production — 1999 to 2000

	All India*
Sugar	16.79 M.T.
Molasses	6.72 M.T.
Alcohol Production	1330 to 1635 M.L.

	Tamil Nadu		
	1987-89**	1992-93***	1999 to 2000****
Molasses	0.36 M.T	0.69 M.T.	1. M.T.
Alcohol production	63.73	113.00 M.L.	170.00 M.L.

M.T. — Million Tonnes ; M.L. — Million Litres.

* *Source* : S. L. Venkateswaran, Chemical Weekly, July 4, 1989

** Estimates based on information obtained from Tamil Nadu Government

*** Projected figures based on sugarcane development potential.

TABLE — 8

Ethylene Capacity World-Wide

Country	**Capacity as on 6.1.86** (In thousand TPA)
United States	16,778
Western Europe	14,786
Japan	5,418
Taiwan	453
Singapore	300
Korea	505
India	252
World Total	48,151

TABLE 9

Perspective Plan for Alcohol Based Chemicals

Product	Estimated Demand 1995-96 MT	Production from Alcohol MT	Requirement Alcohol KL
Acetic acid including anhydride	1,50,000	1,50,000	1,80,000
Vinyl acetate acetone	56,000	2,000	5,000
Polyethylenes	3,50,000	15,000	33,000
Vinyl Chloride	2,50,000	15,000	20,000
n-Butanol	25,000	15,000	33,000
2-Ethyl Hexanol	67,000	25,000	70,000
Ethylene Oxide (glycol)	1,40,000	20,000	40,000
Butadiene	—	40,000	1,20,000
Styrene	90,000	45,000	40,000
Other misc. like ethyl acetate ether, ethylene etc.			50,000
As solvent & processing agent			50,000
			6,48,000

Source : S. L. Venkateswaran, Chemical Weekly, July 4, 1989.

These suggestions are in addition to the existing alcohol based units.

TABLE 10

Projections for Petrochemicals — 2000

('000 Tonnes)

Sl. No.	Item	Actual consumption 1988-89	Estimated Demand for 1999-2000	
			By ICMA*	By DVK**
1	2	3	4	5
1.	L.D.P.E.	173	400	490
2.	H.D.P.E.	142	300	383
3.	P.V.C.	239	350	501
4.	Ethylene Oxide	34	230	NA
5.	Glycols	110	267	133
6.	Polystyrene	45	98	NA
7.	Benzene	150	NA	498
8.	O-Xylene	75	NA	NA
9.	P-Xylene	170	NA	211
10.	Polypropylene	66	45	284
11.	DMT/PTA	270	NA	NA
12.	Caprolactum	100	352	NA
13.	EPDM	NA	NA	NA
14.	ABS/SAN	8	15	NA
15.	Polyester	146	NA	NA
16.	Nylon	59	NA	NA
17.	Phathalic Anhydride	52	113	NA
18.	Linear Alkyl Benzene	120	NA	383
19.	Propylene Oxide	NA	45	NA
20.	Polyols	NA	NA	NA
21.	Polyurethane	NA	NA	NA
22.	SBR/Polybutadiene	64	122	NA
23.	Polyvinyl Acetate	NA	32	NA
24.	2 Ethyl Hexanol	NA	NA	NA
25.	Acrylonitrile/Anrylic fibre	36	NA	NA
26.	Phenol	46	75	NA
27.	Ethylene-Propylene Polymers	NA	NA	NA
28.	Vinyl Acetate Monomer	10	32	NA
29.	Nitrile Rubber	2	7.5	NA
30.	Propylene Glycol	NA	21	NA
31.	Plasticizer Alcohols	NA	54	NA
32.	Butanol	NA	13.5	NA
33.	Isopropyl Alcohol	NA	5.2	NA
34.	Acetone	NA	40.7	NA
35.	Maleic Anhydride	NA	14	NA
36.	Epichlorohydrin	NA	16	NA
37.	Glycerol	NA	—	NA

* Indian Chemical Manufacturers Association

** Mr. D. V. Kapoor Committee on Petrochemicals.

TABLE 11

Contribution of Tamil Nadu to Petrochemicals

(including present schemes under implementation)

('ooo tonnes)

Sl. No.	Item	Actual Consumption 1988-89	Estimated Demand 2000	Tamil Nadu's envisaged contribution
1	2	3	4	5
1.	LDPE/LLDPE	173	490	—
2.	HDPE	142	383	—
3.	PVC	239	501	33
4.	Ethylene OXide	34	230	—
5.	Glycols	110	267	—
6.	Polystyrene	45	98	—
7.	Benzene	150	498	30
8.	O-Xylene	75	NA	30
9.	P-Xylene	170	211	105
10.	P P.	66	284	—
11.	DMT/PTA	270	NA	—
12.	Caprolactum	100	352	—
13.	E P D M	NA	NA	NA
14.	ABS/SAN	8	15	NA
15.	Polyester	146	NA	12
16.	Nylon	59	NA	7
17.	Pthalic Anhydride	52	113	14
18.	LAB	120	383	80
19.	Propylene Oxide	NA	45	12
20.	Polyols	NA	NA	6
21.	Polyurethenes	NA	NA	6
22.	SBR/Polybutadiene	64	122	—
23.	Poly Vinyl Acetate	NA	32	—
24.	2 Ethyl Hexanol	NA	NA	—
25.	Acrylo Nitrite	36	NA	—

Table 11 contd.

Sl. No.	Item	Actual Consumption 1988-89	Estimated Demand 2000	Tamil Nadu's envisaged contribution
1	2	3	4	5
26.	Phenol	46	75	—
27.	Ethylene Propylene Polymers	NA	NA	—
28.	VAM	10	32	—
29.	Nitrite Rubber	2	7.5	—
30.	Propylene Glycol	NA	21	8
31.	Plasticiser alcohols	NA	54	—
32.	Butanol	NA	13.5	—
33.	Iso Propyl Alcohol	NA	5.2	—
34.	Acetone	30	40.7	—
35.	Maleic Anhydride	NA	14	1
36.	Epichlorhydrin	NA	16	—
37.	Glycerol	NA	—	—
38.	Acetic Acid/Anhydride			
39.	Glyoxal	2000	8000	—
40.	Methanol	50	282	—
41.	Aniline	15	32	—
42.	Nitro Benzene	24	46	—
43.	Nitro Toluenes	6	6	—
44.	Nitro Chloro Benzene	8	11.5	—
45.	Acetaldehyde	60	164	6
46.	Acetid Acid	59	210	9

TABLE 12

Suggested Capacities to be Established in Tamil Nadu by 2000
(as down stream units attached to a naphtha cracker)

Sl. No.	Name of Product	Capacity tonnes/annum	Basic Block	Requirement tonnes/annum
1.	PVC/PVDC	50,000	Ethylene	35,000
2.	H.D.P.E.	50,000	Ethylene	52,500
3.	Polystyrene	20,000	Ethylene	8,000
			Benzene	20,000
4.	A.B.S.	6,000	Ethylene	800
			Benzene	2,000
			Propylene	2,600
			Butadiene	2,000
5.	S. A. N.	10,000	Ethylene	3,000
			Benzene	6,700
			Propylene	4 300
6.	S. B. R.	30,000	Butadiene	24,000
			Benzene	6,000
			Ethylene	2,000
7.	Poly Vinyl Acetate	10,000	Ethylene	12,000
8.	2 Ethyl Hexanol	20,000	Propylene	20,000
9.	Ethylene Oxide	5,000	Ethylene	5,500
10.	E. P. D. M.	10,000	Ethylene	4,000
			Propylene	7,000
11.	Acrylonitrile	30,000	Propylene	36,000
12.	Glycerol	10,000	Propylene	6,500
13.	Epichlorhydrin	5,000	Propylene	3,600

Total requirement of Basic Building Blocks for the above units:

1. Ethylene — 123,200 tonnes/annum
2. Propylene — 80,000 „
3. Benzene — 34,000 „
4. Butadiene — 26,000 „

Competitiveness in the Private Sector in the VIII Plan*

Presumptions

A first presumption is that competition between firms in the private corporate sector — good for the firm and good for those who consume its products. It is presumed that inter-firm competition will promote productivity and reduce costs and so increase the profit margin for the competing firms. This would also bring about an equivalence between the reduced costs and prices, which reduced prices will benefit the consumer.

A second presumption is that the private corporate sector is not, by and large, engaged in the production of infrastructural services and goods and those with heavy capital intensity and long gestation periods, where competition is not possible. On the other hand, as the private sector is engaged in producing consumer goods and consumer intermediate's and durables, the normal condition of its constituents should be one of competitive relations.

A third presumption is that for certain relatively capital intensive consumer durables, the question of scale of production sets the limits to competition — to semi atomistic competition. Here there is a minimum, if not optimum, size needed for the producing firm to be able to obtain the economies of productivity and various other externalities. This sets a limit to competition in this group of industries.

A fourth presumption is where production of any set of goods — particularly intermediates and durables — is under oligopolistic production conditions, competition between the oligopolies must be ensured to avoid price fixing and others restrictive production and trade practices. This is one of the functions of the commissions set up in various economies to avoid oligopolies moving in the direction of monopolies, as far as competition in terms of the production and supply of goods, and costs and prices manipulations are concerned.

Eighth Plan Presumptions

The above four presumptions are not time and/or space bound.

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* Article by Dr. Malcolm S. Adiseshiah for the Special Annual Issue of Indian Merchant's Chamber, Bombay, October 1989.

Deregulation

Now *turning to* the Eighth Plan, it is presumed that the policy of deregulation of unnecessary licensing, export and import controls, credit, taxation and capital issues limitations will be continued in effect. It is presumed that what the 1969 Dutt committee described as the large 'middle area' where discriminatory decisions in industrial licensing *will be minimised through detailed* industrial planning for the most critical industries on the one side, and the system of protecting the small scale sector and preventing undue regional concentration on the other, will be in effect in the Eight Plan. In particular, it is presumed that the small print in this delicensing area, involving the continued obligation of applying to government agencies for sanction and endorsement as well as the procedures and discretionary decisions which harass the entrepreneur even in the case of delicensed industrial areas when they go for their registration will be completely done away with.

Again, it is presumed that during the Eighth Plan the restructuring process of the private corporate sector will continue so that it is able to produce quality goods at low cost for the domestic market and compete effectively in the world markets. As South Korea and Japan which have achieved these ends show, these necessary and laudable purposes for the units in the private corporate sector will not be attained either by exposing their capital needs solely to workings and vagaries of the internal money market or by dismantling the protective barriers needed by the units for their effective functioning. When this latter was done for some parts of the engineering industry in the Seventh Plan, its, result was the dumping of steel and attempts to flood the market with capital goods at throw away prices, showing that the international market is not a competitive market, as we economists understand competitiveness, that the prices at which those engineering goods are dumped in this cocntry do not reflect their production costs, and are often lower than their prices in their country of origin. In other words, in the Eighth Plan, to avoid the private corporate sector being adversely affected by a massive inflow of underpriced imports, the units in the sector should be allowed the links between their production growth and their productivity growth, which requires a growing market, which only will result in a lower unit cost.

Cost reduction

This means that in the Eighth Plan, such cost reductions and effective use of resources will be promoted through *increased effective competitiveness* in the private corporate sector. If these are accompanied by increased state investments and rural incomes, the competition among the firms will also have a positive effect on employment generation, which is very important, and which can reverse the negative employment generating effect for the penultimate year of the Seventh Plan the Economic Survey 1988-89 reporting that employment growth was —0.8 per cent in the private sector and the 1988 CEI survey reporting a decline from 73.7 lakhs in 1986 to 73.6 lakhs in 1987 in private sector employment.

But such competition in private corporate sector in the Eighth Plan has certain essential accompaniments which th example of Japan and Korea demonstrate. In these countries, there is unbridled competition among the firms in

the private sector, along with a high degree of policy coordination in regard to the external sector. So too in the Eighth Plan, while an increasing level of domestic competition in the corporate sector will aim at increasing production and emplyoment as noted above, these require that the domestic market for the corporate sector be strengthened and expanded, and not be curtailed or destroyed by ill considered fiscal, credit or import and export policies. Infact, prerequisite for expanding and successful competition in the private corporate sector in the Eighth Plan is a growing and dynamic domestic market for the products of the sector. This is the necessary condition for the competitive profile of the private sector traced earlier. Without it, all other incentives and MRTP and FERA restrictions will not conserve competition.

Role of Industry and Trade Bodies

In this regard, it is important that trade and industry associations like CEI, Assocham, FICCI, IFMA and their state counterpart must see one of their main functions to be to educate their member member firms and units to become more competititve and more efficient. This calls for programmes which emphasise productivity and quality consciouness, energy conservation and human resources development. If this is undertaken at all levels in a firm — top management, intermediate management, stopfloor stewards and the workers, it will not only popularise these essential concepts, but also improve management — worker relations and strengthen the social and industrial infrastructure, or develop them where they are lacking.

The private corporate sector in the Eighth Plan as part of its drive towards a more dynamic and competitive profile will also have to tackle the problem of industrial sickness. It will have to take back from the public sector the viable units transferred to it when they sick, as well as the loss makinig public enterprises, and bring to them the on the spot decision making, the flexibility and result oriented professionalism, which are characteristic of the private sector. This will also enable it to move the slow moving physical infrastructure so badly needed by the growing private enterprises.

Private sector and physical infrastructure

In the Eighth Plan, competition among the large private sector firms like, Reliance, Tatas, Gammon India, Hindustan Construction, Birlas, Singhanias, Thapars, SPIC, TVS etc. will increase their investment in building roads, bridges, ports, inter-sea and inter-river routes which directly or indirectly benefit their concerns and marketing networks. More and more road building and bridges and culvert construction will increasingly be undertaken by private sector firms in in the rapidly developing class II, III and class IV towns, and more particularly in satellite towns to the overcrowded great metropolitan cities.

There is a price for this involvement of the private sector firms in infrastructural development. Most of them want transfer of land which they would develop, as in the case of 50-60 square kilometre in the Uran-Panvel stretch which Reliance bought from local farmers or CIDCO at nominal rates. Such land development for real estate and buildings (which will also send land development prices soaring) is the price that has to be paid. The other more serious

price is that every deal with (Delhi) DDA, (Bangalore) BDA, (Bombay), CIDCO etc also becomes the gateway to corruption, in which the private sector firms get involved as donors.

Lessening Regional Industrial Imbalances

The Eighth Plan, as part of the drive to promote competition in the private sector, will see some correction in the growing regional industrial imbalances as between the west and north of the country, on the one hand, and the south and east of the country on the other. Industrialists of the second group feel that they have missed out a lot by not being close to Delhi, and not being involved in the movement of large funds in the form of agency commissions on which they have been left out not being involved in Union government turnkey projects, and World Bank and other foreign aided projects. This may mean that the industrialists of the south and east will have to become street smart, and develop values as well as techniques that recognise that big projects for their regions involve big pay offs. This calls really for a new breed of entrepreneurs who can face the changes, that they are no longer going to conduct their business affairs by traditional, conservative, old world values. Meanwhile taking the southern region, there is now rapid takeover of firms by outsiders but also important internal changes such as Standards Motors changing hands, Binny having a new management, Enfield fighting again for survival, Coromandel Fertilisers run in with SPIC and EID Parry, Peerless entering India Cements, and the auto ancillaries for so long having the South as its home, moving to the west (Bajaj) and Telco) and the North (Maruti). Hence entrepreneurs in the South and East have not only to guard their domestic niches, they have to become aggresively competitive to take their share of the All India corporate sector pie in the Eighth Plan.

The Power Imperatives

The private corporate sector will have to play an active role in power generation in the Eighth Plan, as power has become the major bottleneck facing industry already now in the closing years of the Seventh Plan. For the Eighth Plan, the power requirement has been modestly estimated at an additional 48,000 MW, against which the public sector plan is only for the generation of 38,000 MW, for which even so the resources are in some doubt. So the long delay amounting near sabotage by government in approving private sector to participation in power generation will now be forcibly ended, because the public sector does not have the resources to continue standing in the way of the private sector playing an active role in power. This private sector participation in power generation in the Eighth Plan will have two dimension. First, it will be the start of competitive generation with the State Electricity Boards who have long held its monopoly and who in the absence of any competition, are running their enterprises so badly, that in the Seventh Plan their losses amounted to Rs. 11,757 crores. The only existing private sector project — Tata's Chembur — shows how a competitive edge can keep costs down. Whatever is so saved in the Eighth Plan as a result of the competition offered by the private sector, will be needed by the private sector to fund their power generation projects. And that is the second dimension. If the private sector is allowed to generate 10,000 MW, it will need to raise some Rs. 12,000 crores, about half from the stock market through the issue of bonds.

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